

MONTANA AERONAUTICS COMMISSION



Volume 14, No. 2

February and March, 1963

Airport Management Conference

The Airport Management Conference will be held on Thursday, April 4. Attending will be the MAMA Members—Airport Managers, Board Chairman, Operators, City Commissioners and other interested parties. Everyone is urged to attend the one day session. Discussions will begin at 9 a.m. with a Banquet in the evening.

Topics for discussion will be "Airport Field Rules", "Surplus Property for Airports", "Parachute Clubs", "Satellite Airports", and a general session of questions and answers pertinent to Airport Management Operations and Maintenance.

Officers for MAMA are: Ed Iverson of Belgrade, President; Hugh Kelleher of Helena, Vice-President; Ken Rolle of Billings, Secretary; James Kreitzberg of Butte, Director; Paul Kelleman of Livingston, Director.

The purpose and aims of the MAMA is the dissemination of information regarding airport management obtained through the experience of all members and employees in the field.

At these meetings the discussion topics vary from the leasing of hangar space to patching a runway, to proper methods and procedures in applying for State and Federal aid for airport improvements. If you have any suggestions for the group discus-

sions, please notify any of the above parties and they will try to assemble the latest information regarding any problems.

For more information on this annual meeting contact either Hugh Kelleher or James Monger of Helena. This Conference will be co-sponsored by the Montana Aeronautics Commission.

"Flying Farmers, Ranchers" Seek Telephone Installation

Project plans for airport telephones have been made jointly by aviation groups, the Aeronautics Commission, and Mountain States Telephones for service extensions at Montana airports. This assists the Federal Aviation Agency's small airports program for 1963.

In announcing the program, Montana Flying Farmers and Ranchers' President, Ermal Hanson, emphasized that these extensions are established on a business basis, fill an essential need for safety and convenience, and are available if required in national emergency conditions.

Mountain States Vice-President, George Redhair points out that with more persons flying and increasing use of both small and large airports, the time is appropriate to consider added services.

Suggested locations are White Sulphur Springs, Deer Lodge, Conrad, Drummond, Harlowton,

Forsyth, Malta, Scobey, Superior, Gardiner, Eureka, Whitehall, Big Sandy, Harlem, Hot Springs, Thompson Falls, Sunburst, Townsend, Twin Bridges and Dell, Montana.

Revised Directory Available

The newly revised Montana Airport Directory will be mailed to all 1963 Registered Pilots within the next few days.

The revised directory contains the latest information on 113 Montana Air Strips and Air Fields.

Pilots are asked to remove the entire contents of the old directory and use the covers on the new one.

If a registered pilot does not have the old directory he should contact the Montana Aeronautics Commission Office requesting the cover.

FEDERAL AVIATION AGENCY INSPECTION ITINERARY

Airport	February	March
Butte		
Belgrade	13	20
(Gallatin Field)		
Billings		
(Logan Field)	4-11-18-25	4-11-18-25
Culbertson	6	
Glasgow		6
Glendive	20	
Great Falls International	6	6
Havre		
Helena		
(City-County)		
Lewistown	27	
Miles City		20
Missoula	27	28
Flight Schedules By Appointment Only.		

FOR SALE: Wind Socks, 24" standard \$8.00, 36" Commercial type \$16.00. Send order and payment to Montana Aeronautics Commission, Box 1698, Helena, Montana.

FOR SALE: Aeronca Chief. Recovered in 1959, 170 HSMO on 75 hp, good upholstery, glass and tires. Sensitive altimeter turn and bank, 8 day clock. Dr. J. L. Cromwell, Box 420, Livingston, Mont.

AIRPORT NOTES



By **JAMES H. MONGER**
Chief, Airports Division

CHOTEAU: The Airport Board has employed a consulting engineer to conduct preliminary engineering on the airport. They expect to apply for aid this summer. The project will consist of extending and paving the runway and paving a taxiway and apron.

STANFORD: A meeting was recently held in Stanford relative to future airport development. Area pilots have suggested that the field be improved by extending and paving the runway and installing runway lights.

WEST YELLOWSTONE: Advertisement for bids on the new West Yellowstone airport will be solicited on February 18th. The bids will be opened and the contract awarded on March 18th. Actual construction will take place as soon as the weather permits in the spring.

AUGUSTA, BOULDER AND POLEBRIDGE: Call for bids will be advertised on February 18th for these utility airports. Separate contracts will be awarded on March 18th and construction will commence as soon as weather permits.

BOZEMAN: The Gallatin Airport Board has made an application for a federal grant and a MAC loan for an airport project. The proposed project will consist

of the extension of the northwest-southeast runway. The runway will be extended and paved for an additional 1100 feet; increasing the total length to 6500 feet.

BILLINGS: The city of Billings has made application for federal aid for an airport project. This reconstruction project will consist of rebuilding the north ends of runway 4/22 and 16/34 and the construction of taxiways for the General Aviation hanger areas. The total cost of this project will be approximately \$343,200.00.

All projects that are sponsored by the Montana Aeronautics Commission are awarded by the State Board of Examiners.

Any contractor interested in bidding on an airport project is required to have a Class A, B, or C contractors' license. Applications for license can be obtained from the State Board of Equalization.

SNOW SURVEYS BY AIR

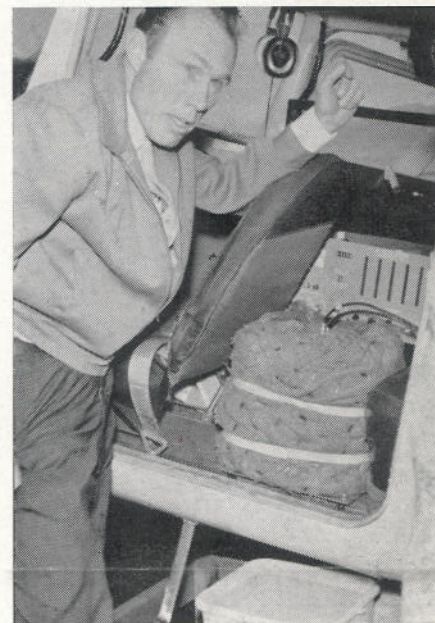
Representatives of the Agricultural Engineering Department, the Electronics Research Laboratory and the Electrical Engineering Division at Montana State College, demonstrated some experiments they are making to Montana Aeronautics Commission Director, Charles Lynch, last month.

The experiments show promise for developing a system of making snow surveys from the air and thus eliminate the foot work involved in measuring the water content of the snow pack on mountain watersheds.

Working cooperatively on the project are the agricultural engineering department and the electronics research laboratory. Funds for the various stages of the research are provided by the Bonneville Power Administration.

Data gathered by snow surveys during the winter months on watersheds in Montana and other western states provide the basis for making water supply forecasts that are used by dam operators, farmers, power companies, municipalities and others.

The present surveying system requires periodic, usually once a month, visits by men on skis or snowshoes to the more than 100 snow measuring courses in the state. If the job could be done by flying over the measuring courses not only would much time and expense be saved but more accurate measurements and more of them could be made.



Paul Jordan from the Electronics Research Laboratory demonstrates the operation of measuring equipment. A pan of water with a cobalt source under it was accurately measured. Lynch rode with Charley Bowman in the aircraft on a demonstration over the test site and reported excellent success.

The system on which the MSC research men are working involves the use of a small radioactive isotope on the ground and a digital counter and associated equipment in a light plane to count the gamma rays emitted by the isotope. When gamma rays pass through water their count is reduced, thus by knowing the gamma ray count with no water over the energy source and comparing it with the count after the rays pass through water, the water content of the snow cover can be calculated.

In tests at an experimental site on the MSC campus the system has proved feasible. The next step will be to refine the equipment and make further tests on snow measuring courses during a winter season.

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

Box 1698
Helena, Montana

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Charles A. Lynch, Director

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ARTCRAFT PRINTERS

**FRONTIER AIRLINES
TRAFFIC DATA AT "USE IT
OR LOSE IT" CITIES**

NOVEMBER, 1962

	Passengers On	Actual Aircraft Departures	Average Passenger Loadings Per Flight
Billings	685	142	4.8
Glasgow	74	57	1.3
Glendive	25	55	.5
Great Falls	207	60	3.4
Havre	27	53	.5
Lewistown	61	55	1.1
Miles City	69	58	1.2
Sidney	30	37	1.0
Wolf Point	30	50	.6

12 MONTHS ENDED NOVEMBER 30, 1962

Billings	8,900	1,745	5.1
Glasgow	1,255	700	1.8
Glendive	466	674	.7
Great Falls	1,980	713	2.8
Havre	474	654	.7
Lewistown	636	672	.9
Miles City	724	700	1.0
Sidney	863	1,050	2.8
Wolf Point	385	640	2.6

DECEMBER, 1962

Billings	707	142	4.10
Glasgow	75	58	1.29
Glendive	38	59	.64
Great Falls	194	62	3.12
Havre	42	55	.76
Lewistown	87	57	1.52
Miles City	48	58	.82
Sidney	90	92	.97
Wolf Point	38	56	.67

FOR SALE: 1959 Comanche 250 Auto-flight Zero since major, new paint, never damaged. Will trade, \$12,500. 1953 Cessna 180 Zero major J engine, omni, skirts, full paint, recent interior, direction finder, no damage, very nice. \$6950. Byron Bayers, Twin Bridges, Montana. Phone 684-5465.

WANTED TO BUY: Cessna 170B-172 or equivalent (No cloth). Must be clean and priced realistic, include all information first letter. J. D. Kelly, Box 130, Hardin, Mont.

TO TRADE: Lycoming C 235-VI, 108 H.P., with accessories, for Continental C 85-8 with accessories. Jeff Morrison, Morrison Flying Service, Helena, Montana.

New FAA Rule Will Prohibit Non-essential Flying in Disaster Areas

A civil air regulation issued recently by the Federal Aviation Agency prohibits aircraft from operating in a disaster area unless they are taking part in search and rescue operations or carrying news media representatives or persons on official business in connection with the disaster.

The new rule becomes effective March 20, 1963.

Non-essential flights will be prohibited in the airspace below 2,000 feet above the surface and within five statute miles of certain disaster areas resulting from aircraft accidents, train wrecks, forest fires, earthquakes, floods, and similar disasters.

FAA will designate the disaster area through a Notice to Airmen (NOTAM) giving location and dimensions of the area.

Purpose of the rule is to prevent sightseeing aircraft from congregating over the scene of a disaster which might generate high public interest and create potential conditions for midair collision. Also, the rule is intended to restrict other non-essential flying which might interfere with the safety and efficiency of airborne relief operations.

Planes carrying newsmen and persons on official business will be permitted to operate above the altitudes being used by relief planes. They also may fly at the same altitudes or below the altitudes being used by relief aircraft provided they obtained prior approval from the agency responsible for conducting relief activities.

The NOTAM designating the disaster area will include details to assist pilots to conduct such flights. The NOTAM will also give the name of the air traffic control facility with which pilots would be required to file a flight plan and other necessary information before operating in the disaster area.

Regardless of altitudes at which authorized-to-fly news planes would still be governed by existing air traffic rules. For example, Section 60.17 of the Civil Air Regulations prohibit aircraft

from operating less than 1,000 feet above a congested area or within 500 feet of persons or structures in a non-congested area. Helicopters can operate below these heights provided they have a place to land in case of engine failure.

The rule makes provision for non-relief aircraft to fly through a disaster area if they are operating to or from an airport located within the area. These flights would have to operate in such a way as to avoid endangering or hampering relief operations. If pilots find it impractical to operate safely above or around the area because of terrain, weather, or other factors, they could fly enroute through the area if they give prior notice to the air traffic control facility specified in the NOTAM.

Aircraft will be permitted to operate through the area when specifically authorized under an IFR (instrument flight rules) air traffic control clearance.

The new rule (Amendment No. 60-30, Part 60, Air Traffic Rules, Reg. Docket No. 1160) adds Section 60.28, "Avoidance of Disaster Areas", to the Civil Air Regulations.

MONTANA TOWER-CONTROLLED AIRPORT OPERATIONS

DECEMBER

	Total Operation	Instrument Operation
Billings	6,827	562
Great Falls	4,853	1,106
Missoula	2,601	200
Helena	1,746	90

JANUARY

Billings	4,241	743
Great Falls	3,196	1,099
Missoula	1,403	181
Helena	1,094	167

The test of a gentleman is his respect for those who can be of no possible benefit to him.

Putting your best foot forward does not mean you should kick about everything.

Good judgment often comes from experience gained through poor judgment.

The bigger a man's head, the easier it is to fill his shoes.



Dick Munroe of the Montana Aeronautics Commission presented Governor Tim Babcock with the first 1963 pilot registration card recently. The Governor is Montana's first chief executive with a civilian pilots license. The late Governor Nutter was a B-24 pilot during World War II but did not fly as a civilian. Governor Babcock became interested in flying after service as a combat infantryman in World War II. He owns a Beechcraft Bonanza, holds a private license and has accumulated 4500 hours of flight time.

Aviation Education Notebook

Mary Jo Janey

Throughout the last few years, several hundred of Montana's seven thousand public school teachers have attended aviation education workshops in Montana colleges. Besides these teachers, who take back with them to the classroom a better understanding of the important place that aviation occupies in the educational program, many other teachers we know consider aviation and related topics to be among the best "centers" around which to build interest and motivate more rapid learning of skills and facts. This is especially true as more and more textbooks of recent date are taking the air and space age into consideration as necessary adjuncts to modern teaching and learning. Just as a case in point, let us examine some of the focal points of two curriculum areas, social studies and science, to see how this is true.

In the first two grades, children learn about their local communities. They are interested in the sun, moon, and stars. They study the day and night sky. Sometimes these children have a unit of study about airplanes and the airport, as community "helpers." They draw pictures of airplanes, learn about them, and describe them. They display an amazing amount of information already acquired through experience with airplanes. Many schools are including a trip to the airport or even a flight as a vital part of community study.

In grade three, children learn how the necessities of food, clothing, shelter, transportation, and communication are met. One of the widely-used social studies texts, Allyn and Bacon's "The Community Where You Live," includes weather, maps, and how people travel. How well these topics can be integrated with Allyn and Bacon's "Exploring Science," which includes clouds and airplanes!

In grade four, opportunities for aviation education are even more rewarding as an integrated factor. Here the children study in science making gliders, controls of airplanes, power for airplanes, wind and airplanes, and flying weather in Allyn and Bacon's "Exploring Science". The same publisher's "Journeys Through Many Lands", social studies text, begins with geography of the air age, with emphasis on a study of maps and globes to instill the global concept of travel. The children study lands and peoples and life in tropical, desert, temperate, mountainous and other kinds of environment. There does not exist a better tie-in than the airplane to bind these studies together to give the children a clearer understanding of time and distance relationships.

Grades five and six pursue this structure with particular focus on the United States and the Eastern Hemisphere, and in science with more detail on how airplanes fly.

The important thing in teaching these areas is to be realistic. Too often we teachers still view the world from our "groundedness," without taking into account the fact that today's chil-

dren require an entirely different point of view, one that shows the world tremendously influenced by the airplane.

Another point we must consider is that through ages past, man's development and progress has been tediously slow. Our civilization depends entirely upon the machine, but we have reached this dependence only within the past fifty years. We stand at a point now where a spectacular change is taking place, and the rate of change staggers the imagination. Our children must not be allowed to stumble along haphazardly in reaching understanding of the factors which promote this change. The world they will be living in requires that we prepare them by emphasizing today's developments.

Next issue, we shall discuss how current affairs are an unusually important part of the total instructional part of the program, and ways that current affairs can be used most effectively in the classroom to keep young citizens informed of significant air age happenings and accomplishments.



Ensign Roy Lindgren, United States Navy, spent Christmas leave with his family in Montana. Roy is flying a T-28 at Whiting Field near Milton, Florida. He plans on taking multiengine flight training in the advanced flight training unit. Roy was with the Information Staff of the Montana Highway Department before entering the Navy. His mother is Amelia Lindgren of Belgrade. His brother "Swede", is Chief Pilot for the Montana Highway Department.

Cold Weather Operation



BERNARD A. GEIER

FAA Safety Agent—Billings

Since we are now in our coldest months of the year, here are a few items that you should recall.

Winter days are short. Are the navigation and landing lights in order? Is the weather suitable for night operation?

Do not attempt to take-off with snow, frost or ice on the wings or the control surfaces. Remember that the stalling speed is greatly increased under these conditions.

Guard against condensation. Water in the fuel lines can affect the engine operation. Last year we had one gas line split due to freezing of water in the line. Water in the airspeed line, if it freezes, can block the line so that the airspeed indicator, the sensitive altimeter and the vertical speed indicator will give incorrect readings or fail completely.

Oil gets sluggish in cold weather and an engine will build up excessive pressure immediately after starting. This sometimes strains the lines and connections between the tank and the engine, or the lines to the oil radiator. Check them frequently.

Check cabin heaters. Carbon monoxide is an ever present danger. The smallest amount can affect a pilot's judgment or flying ability. Over a period of several hours it can cause unconsciousness.

Check baggage door seals. Poor seals will cause the cockpit air to be drawn out through the baggage door. Replacement air will be drawn in through any hole that there may be in the firewall.

This will then draw in carbon monoxide from the engine compartment.

Drifting snow may fill the tail end of an airplane parked outside, resulting in adverse weight and balance. Run a good preflight.

Drifting snow may form ice inside of control surfaces, destroying their normal balance and promoting control flutter. Run a good preflight.

Use of wheel pants should be avoided for operation on snow or ice.

Taxiing in light snow may cause snow to enter carburetor air screen. This will block the air flow and cause engine malfunction.

Crankcase breathers require extra precautions to avoid freezing in flight and forcing the oil out of the front seal.

One last suggestion, in our country—fly at an altitude when on a cross country, so that you can always be in range of a ranch house. In extreme cold weather, a safe landing in open country after engine failure may still result in serious exposure to the elements. If a ranch is not available, glide to the nearest traveled highway.

Survey of Agricultural Aircraft

A survey of agricultural and other special work use of aircraft was launched by the Federal Aviation Agency in December.

Information from the survey will be used in compiling the 1962 edition of "Aircraft in Agriculture". This handbook is published periodically by the FAA and sold through the U. S. Government Printing Office.

Survey questionnaires will be distributed to all agricultural aircraft operators with a request that the forms be completed and returned within 10 days. Each operator is asked to complete a brief report on his 1962 activities—giving data on the number of acres treated, the quantity of material dispensed, and the flight hours by type of aircraft. All replies will be treated as confidential.

LADY SOLOES, HUSBAND PAYS

An evening at the Montana Club and flying stories usually results in a sore head the next morning. Carl Zur Muehlen may or may not have had a sore head but the evening cost him a fifty dollar bet, flying lessons for his wife, plus the knowledge that he is not always right.



"Which way the Atlantic?"

It all started with Mrs. Zur Muehlen's casual cutting remark to a group of Montana's flyers that they all had shifty eyes. Just where or what direction the conversation went from there is rather confusing. But before the evening ended Mr. Zur Muehlen bet C. E. (Sandy) McPherson fifty dollars that Mrs. Zur Muehlen didn't have the intestinal fortitude to take flying lessons and solo by January 1st.

Mrs. Zur Muehlen started her flying lessons in September. In December she proved her husband wrong.

The shifty eyed fliers threw another party to welcome a new member to their group. Mrs. Zur Muehlen was presented with appropriate flying togs, and with an M.P.A. membership and wings.

Jeff Morrison of Helena, her instructor, received an appropriate gift in glass—and Carl Zur Muehlen paid his bet, was named President of the Shifty Eyed Flyers Auxiliary, and received the news that his wife planned



Mr. Zur Muehlen and Instructor Morrison.

"Congratulations. We made it."



Zur Muehlen pays. He tried flying once—gave up after five hours.

on continuing her training for a private pilot's license. Mr. Zur Muehlen made no comments nor placed any bets.

February 21, 1923 — The De-Bothezat helicopter is given a series of flight tests at McCook Field, in which it achieves sustained flight at an altitude of 15 ft. for 2 minutes and 45 seconds.

MPA REPORT

To some pilots he is a cantankerous guardian of runways and hangars. To some, he is more a symbol of flight than the eagle or the Wright Brothers. To hundreds of us he is one of the finest teachers we have ever known. To all of us that fly the Big Sky Country, he is a pioneer and a friend.

He has been a stern taskmaster, yet as patient and gentle to a student as to a child when patience was necessary. His endless stories taught us not only how to master our aircraft, but how to master ourselves. To know Thor Thorstenson, is to know a man whose whole life is the love of flight — he is a man who is awkward and ill at ease anywhere but in or near an airplane. Now this man, who has given so much, has nothing left but the respect and admiration of all who know him.

A near-fatal accident has taken his ability to do the one thing he loves, and Thor's days of logging flight time are over. He is now in the Veterans Hospital in Miles City.

He was in the Plentywood Hospital for 25 days and received over \$2,000, worth of medical care while there. Half of this has been paid, but there is no money or family to take care of the rest. We feel that it is our privilege and responsibility to help him and that is why we, of the Sherwood Pilots' Association, are asking his many friends throughout the state to help. Please send your contribution to the Thorstenson Benefit Fund, % The Security State Bank, Plentywood, Montana. Please help.

MORSE CODE THE EASY WAY

Morse Code, long a pilot "bugaboo", has finally yielded to science. "Programmed instruction", fast replacing conventional "book learning" in schools and colleges, now enters the field of aviation with the announcement by Jeppesen & Co., Denver, Colorado, of a new "programmed" course in Morse Code.

Long an international leader in the field of aviation and naviga-



tion aids, Jeppesen & Co., in collaboration with the Institute of International Research and Development, Lubbock, Texas, is introducing the Jeppesen Morse Code Course.

The new Morse Code Course applies the principles of "machine teaching" to textbook pages. Material is presented in a series of easy steps from one page to the next. The student is asked to write a response after each step. Each succeeding stage requires his knowledge of the subject. According to a spokesman for Jeppesen & Co., this method of teaching enables the average student to learn Morse Code 50% faster than by any previous teaching methods.

Available with the Morse Code Course is a practice phonograph record which enables the student to familiarize himself with the actual sound of the code, so that he can identify and interpret radio code transmissions. Both course booklet and record are being made available through Jeppesen Distributors and airport dealers.

News Items Solicited

Organizations and airports planning special events—fly-ins, dedications and celebrations of various kinds—are urged to submit advance notices to "Montana and The Sky."

These should be sent as early as possible. Deadline for copy is the 15th of the month preceding date of publication. For example, items to appear in the May issue should be in our hands not later than April 15.

If you are anxious to reap the full benefit of the announcement and perhaps increase attendance, notice should be sent two months before your scheduled date.

Letters from readers of our

magazine tell us that news of your organizations and airports is most welcome.

Many aviation events in the State have been scheduled for the same date, we understand. Get yours in early.

Be sure to include all pertinent information—place, date, hours, directions, etc.—as well as name, address and telephone number of person sending the information.

Send your correspondence to Editor, Montana and The Sky, Montana Aeronautics Commission, Box 1698, Helena, Montana.

New Operations Inspector

Arthur A. Kurth has filled the vacancy in the General Aviation Office in Helena that was formerly held by Inspector Cantwell. Mr. Cantwell was promoted and transferred to Spokane.

Art began hanging around airports and washing planes for flight time in 1935. He says he really started flying in 1939. During World War II, he instructed in the old CPT-WTS Program. After the program closed he was called to active duty as a Cadet in the Army Air Force Flight Training Program.

After the war he ran a fixed base operations at Wapello, Iowa. He first got the desire to come to Montana while flying into the state as an executive pilot with United Fire and Casualty Company.

He joined the FAA in 1960 and served with the General Office in Chicago until the Montana Office had an opening.

Art is an avid sportsman and plans on doing lots of hunting and fishing.

Rushing up to a large airline's ticket counter, a man gasped, "Miss, please help me. I have to get to Chicago in the worst way!" The clerk calmly pointed to her left and said, "Sir, that would be the competing airline next to us."

A Texan was telling his agent about teaching his son to drive one of the family Cadillacs. "But Tex," exclaimed the agent, "your boy's only ten".

"Shucks, Ah knows thet," he replied. "Thet's why Ah only let him drive in the house."

WATCH YOUR FUEL



LEE C. MILLS
F.A.A. General Aviation
Inspector, Helena, Montana

In an effort to reduce the number of general aviation accidents and forced landings which are attributed to fuel contamination, the Federal Aviation Agency has been asked to conduct a nationwide surveillance of general aviation fueling facilities. As a result of this program the Maintenance Inspectors will, during regular visits with the operators, inspect the refueling equipment and offer helpful suggestions to the operator toward the delivery of clean fuel.

For instance, the storage tank filler neck openings should be protected at all times to prevent entrance of foreign matter, particularly while it is being refilled. The fuel dispensing hose and nozzle should be protected against contamination when not in use. A nozzle that has sharp edges may possibly damage the bottom of the bladder type fuel cell during refueling; therefore, the nozzle ends should be smooth or if possible made of rubber. The nozzle should not be dragged across the ground when reeling the hose back on the storage drum. The fueling equipment should be identified as to octane rating and should have a means of grounding to prevent static electricity while refueling.

The equipment should contain a filter system to remove foreign matter, and should be checked and serviced regularly.

The main storage tanks should be checked for water and rust regularly. Most of the oil companies will provide a litmus salve for this purpose. The salve is ap-

plied to the tank dip stick and will change color when water is present.

The use of temporary fueling facilities such as drums, cans etc., to refuel aircraft may result in a forced landing if filter funnels or closed containers are not used.

Even though the FAA has no regulatory standards for general aviation refueling facilities it is felt that these inspection points are useful, both to the pilot customer and to the operator who dispenses the fuel, in the furtherance of safety in civil aviation.

* * *

In line with FAA policy to improve service to general aviation, the Flight Service Stations at Bozeman, Livingston and Missoula, have joined the Helena General Aviation District Office in providing their facilities and personnel for administering private pilot written examinations.

Expansion of this service is expected to be particularly helpful to student pilots living in areas that do not have a GADO.

Minimum of 500 Feet Proposed

A new regulation prohibiting VFR (visual flight rules) flight in airport control zones when the ceiling drops below 500 feet was proposed today by the Federal Aviation Agency.

The proposed rule is designed to provide an increased margin of safety in operations around terminal areas as well as to persons and property on the ground.

Under existing rules, VFR flights may operate in and around any airport if the visibility is at least three miles and the ceiling not less than 1,000 feet. However, if the weather drops below these minimums aircraft may still be permitted to operate VFR in and around airports having a control zone under a "Special VFR" air traffic control clearance. Special VFR clearances may be requested by the pilot when he determines that he can operate clear of clouds and in visibility of one mile or greater.

The proposed rule adds the provision that a Special VFR clearance to land, take-off or fly in the airport traffic pattern—all of

which are conducted within the boundaries of the airport control zone—would be granted only if the ceiling is at least 500 feet. The provisions that flight and ground visibility must each be not less than one mile and that the pilot be able to stay clear of clouds carry over from the existing rule.

Helicopter operations would be permitted under a Special VFR clearance in a control zone if the flight can be conducted clear of clouds.

The airport control zone typically extends five miles in radius from the center of an airport and vertically from the surface to an unlimited height. It is designed to protect IFR (instrument flight rules) traffic operating in bad weather. The control zone may have extensions to provide additional controlled airspace for such flights.

Since March 15, 1957, when the current Special VFR rules took effect, experience has shown that pilots may become disoriented while trying to navigate with visual reference to the ground and trying to stay clear of clouds and obstructions at the same time. Under such conditions, a possible loss in control of the aircraft may result.

The new rule proposed (Draft Release 63-4; Reg. Docket No. 1587), "Special VFR Minimum Weather Conditions in Control Zones," would amend Section 60.31, Part 60, Civil Air Regulations. The last day for submitting comments on the proposal is April 7, 1963. Comments should be submitted in duplicate to the FAA Docket Section, Room A-103, 1711 New York Avenue, N. W., Washington 25, D. C.

He who is not grateful for the good things he has would not be happy with what he wishes he had.

You are young at any age if you are planning for tomorrow.

About 75 per cent of all general aviation accidents are caused by pilots who misjudge weather conditions and then are unable to cope with these conditions.



L. A. Warner, Sr., (left) president of Warner Instruments, Chicago, and E. B. Jeppesen, (right) president of Jeppesen & Co., Denver, are shown concluding final arrangements for the acquisition by Jeppesen of manufacturing and distribution rights to several aerial navigation aids developed by Warner. Included in the purchase is the B-1 Slide Computer, a plotter, and a plotter-computer. Warner will serve as a consultant to Jeppesen, and will continue his own business activities based in Chicago.

DANGEROUS DRUGS

By L. M. SOUTHWICK, M.D.
Texas Aeronautics Commissioner

I have been asked several times to give a list of drugs that should not be taken prior to flying. These are those drugs which might cause an upset in equilibrium, make one drowsy, cause overstimulation or in any way result in a disturbance of reflexes or ability to think and act correctly.

There are of course many, many different medicines that fall in one or more of these classes, far too numerous to mention. It will suffice to name them by groups or classes.

The drugs that are probably the most dangerous are those taken for hay fever, asthma or any other allergic condition, and are a large portion of the so-called "cold" remedies. The common name for these is "antihistaminics" or "antihistamines".

Many people have an uncontrollable drowsiness from these and cannot keep awake. Others get an over stimulation and a sense of well-being that removes the ability to fully evaluate any condition and would make them think everything was fine when it was not. The pilot is responsible for his condition between physical examinations and is in violation when his physical condition is not up to par. If he is suffering from

a condition that requires the use of any of these drugs he is not up to par and for that reason alone, irrespective of the possible reactions, he should not be flying.

A large percentage of our airman population is overweight. The only sure way to lose weight and keep it down is to change eating habits, eat less of the same foods one is used to, or better yet, cut out the high caloric foods entirely. However, many do not want to employ this safe, laborious, but sure method so take appetite depressants. These drugs do aid in staying within the allotted caloric intake, but by far the majority of them are central nervous system stimulants; they make people wakeful and increase nervousness. They also produce a feeling of well-being, much the same as do the antihistamines.

The ability of a pilot to recognize dangerous attitudes is subdued. One can approach and go into a stall without realizing it, a very dangerous happening in a traffic pattern and particularly on final approach. This action of the drugs could very well make a VFR pilot feel quite capable of coping with a weather situation he is not qualified to handle.

The same general effect is also seen during the use of medicines that are taken to keep one awake. They, too, are stimulants. One very dangerous possibility is the lack of ability to sense fatigue and in a long flight the drug wears off and the pilot ends up very tired, mentally and physically, and unable to cope with even normal situations.

We all know the adverse effects of alcohol. We know that it is not a stimulant but a depressant. The seeming stimulation is due to a removal of inhibitions. We are aware of the slowing of reflexes under alcohol, of the inability to think clearly, the dulling of the senses. Yes, we are all aware of this; yet many will fly when under the influence of alcohol and a lot of them to their death. It behooves each and every one of us to do all in our power to prevent anyone we know who is under the influence of alcohol from flying. Twenty-four hours is a good time between the last drink and the next flight.

Many suffer at times from "acid indigestion", "nervous indigestion", and gastritis or pre-ulcer symptoms. For these conditions, many doctors prescribe drugs, or combinations of drugs, containing mild sedatives to slow one up, and an atropine-like substance that decreases the acid secretion in the stomach. This latter portion also dilates the pupils as well as producing other side effects. This dilatation of the pupils leads to blurred vision, or at least a decrease in visual acuity. In some the sedative effect is almost overpowering and the individual has to fight sleep. The side effects of these drugs are very dangerous to flying and should not be used at least twelve hours before flight. No one has any business flying when any of these conditions are present anyway, but some do.

Probably the most common type of drug used nowadays is in the general class of antibiotics. They all have a very definite use and purpose. All are most helpful, but all are capable of bringing on a rather severe reaction in a person who is sensitive to the drug. This sensitivity can develop quite suddenly and with no preliminary signs or symptoms during the course of treatment. This reaction may vary from a mild skin rash that may or may not itch, to a severe disturbance in the ability to breathe. There are many, many reasons for not acting as a pilot when taking any of these drugs; the danger of developing a sensitivity is only one. More important than that is the fact that if anyone is taking any antibiotic he obviously is not well, thus prohibited by regulations from flying. A pilot is responsible for grounding himself if at any time his physical condition is not up to par. It is better not to exercise the privileges of the airman's certificate for several days after a course of antibiotics.

There are many other medicines that should not be taken for many hours or days before flying, but this brief discussion will serve to make us aware of the possible dangers and alert us to be sure we are not under the influence of any drug when flying. It is wise to ask your doctor

if the medicine he is prescribing for you will in any way hinder your ability to pilot an aircraft.
... Flight Safety Foundation

Publishers of newspapers and magazines, and operators of radio and TV stations are using more than 30 helicopters and 138 light aircraft to speed reporters and photographers to the scene of news.

February 5, 1905—Capt. Thomas S. Baldwin, in his airship "California Arrow," races a Pope Toledo automobile (fastest on Pacific Coast) from Chutes Park, Los Angeles, to the Raymond Hotel, Pasadena, a distance of 10 miles. Baldwin reaches destination 3 minutes before auto arrives.

Altitude Definitions

Indicated Altitude—is the altitude reading on the altimeter when it is set to the nearest station altitude setting.

Pressure Altitude—is the reading on the altimeter when it is set on 29.92 inches.

Calibrated Altitude—is indicated altitude when corrected for instrument and position error.

True Altitude — is calibrated altitude corrected for temperature and pressure.

Density Altitude — is a measure of the weight or density of the air. Aircraft performance such as take-off run, rate of climb and engine output, are effected by density altitude.

FOR SALE: 1955 Piper Tri-Pacer 150, 510 hrs. T.T. on aircraft and engine; full panel, new battery, Narco super-homer, low frequency; extremely clean, excellent condition, never damaged, always hangared, licensed until August '63. Price \$4800.00.

February 1, 1908—Bids opened by Chief Signal Officer for the first U. S. Government owned aeroplane.

February 10, 1908 — Formal contract for Army's first flying machine signed by Signal Corps with Wright Brothers.

WHAT'S WRONG WITH AIRLINES?

A blast at the domestic airlines for a lack of marketing, not enough advertising, the absence of an industrywide campaign, and for "ill treatment" of its customers, is contained in an article of a recent issue of *Printers' Ink*.

The special report, entitled, "Crisis in the Airlines: Do They Really Want to Survive?", also contains a questionable prediction that the airlines this year will lose more than \$36 million. It makes no mention of the fact that at the end of the first nine months, eight of 11 carriers were in the black and that five of them showed improved results over last year.

"The airlines are in a bad way", the article said. "While the number of passengers continues to grow, the growth is too slow. Unless the industry can expand markets drastically, more carriers will be forced into bankruptcy, or into mergers with other airlines. While all are unanimous on the need for market expansion, and the need to open up new areas of travel, no one seems to be able to agree how . . . In the scramble for passengers, airline advertising is aimed at diverting passengers from other carriers. . . Airline executives agree that what is needed is an industry-wide educational program to bring more customers into air travel. But to date, no carrier seems prepared to make the first move. Regrettably, the industry cannot seem to forget its competitiveness to make a united effort for such a program. And the industry as a whole doesn't seem to think much of advertising; many carriers regard it as a necessary evil."

Harshest words in the article are directed at passenger service: "Far too many carriers have an arrogant attitude toward their passengers. Incredibly few, if any, other industries persist in such ill treatment of its customers. A passenger complaint to an airline will sometimes result in a polite letter apologizing for any inconvenience—but there seems to be little accomplished in correcting the situation." Quoting

several dissatisfied businessmen, the magazine said, "Businessmen are becoming more and more disenchanted with airline transportation — Too many airlines discount this growing resentment— The feeling seems to prevail that because businessmen have no alternate means of transportation, their complaints should be disregarded. But businessmen's complaints keep mounting. Many businessmen are concerned over the refusal of some carriers to serve liquor to coach passengers."

To Find Out How Businessmen feel about air travel, the magazine said that it "sampled its executive panel" and came up with these complaints: "inadequate, uninformed and for the most part uninterested counter and telephone personnel," lost baggage, losing records after bookings are confirmed, bad connections, delays not due to weather, bad service at airports, inadequate transportation to and from airports, waiting in line to check in, inadequate information on delays and not alerting passengers until the last minute, food—"contrary to airline claims, most passengers feel the food is bad", long walks from arrival or departure areas, and waste of time before each flight. The panel commented favorably on United, American and Eastern advertising and was highly complimentary of EAL's shuttle service.

Suggestions on advertising included: stress safety more; more information on schedules; radio reports on flight conditions, such as EAS; stress family flying; "don't concentrate on the company so much—consumer is important, too;" more TV ads and direct mail; stress dependability and performance.

The article praises EAL's shuttle service which it describes as an "unqualified success" and which has eliminated the red tape from air travel. It also described low-fare services of Pacific Southwest and Western and added: "It would seem that the carriers' united plea that slashing air fares will not result in more passengers would bear looking into."

It includes: "Today airlines face their most serious dilemma.

Need for up-to-date marketing methods, sounder, broader advertising campaigns and larger ad budgets, along with industrywide cooperation for solutions to the industry's collective problems makes the challenge facing domestic airlines never so great. Or the potential so lucrative."

FAA Extends Comment Date for AG Aircraft

New certification and operating standards for agricultural aircraft operators have been proposed by the Federal Aviation Agency.

Most agricultural aircraft currently operate under a "certificate of waiver" permitting them to deviate from the Civil Air Regulations governing minimum altitudes over congested and non-congested areas. Neither the FAA nor the agricultural aircraft industry has been entirely satisfied with this system, however, since it authorizes non-observance of regulations.

The proposed new rules would replace the waiver certificate with a standard commercial or private agricultural aircraft operator's certificate of indefinite duration. Under this system, each operator would be held responsible for the safe conduct of his agricultural activities, including both flight maneuvers and dispensing materials and chemicals from aircraft.

Holders of valid waiver certificates with good safety records would be granted an operating certificate upon application. New applicants, however, would be required to demonstrate knowledge of agricultural materials and their application and exhibit proficiency in such basic flight maneuvers as short-field, and soft field takeoffs, swath-runs, flare-outs, pull-ups and turn-arounds.

The commercial certificate would authorize flights over non-congested areas only or over both non - congested and congested areas, depending upon the qualifications of the operator. The certificate would be good throughout the United States and its possessions.

Private agricultural aircraft certificate holders would be limited to operations over non-congested areas of property which they own or have under lease, or over crops in which they have a legal interest. They would not be permitted to fly for hire.

Issuance of the proposed rules points up the tremendous growth of the agricultural aircraft industry since the end of World War II. In 1947, there were approximately 1,000 aircraft engaged in these operations. By 1960, the number had grown to more than 5,000. These aircraft flew nearly 890,000 hours and treated almost 52 million acres.

Insect control remains the primary job of agricultural aviation, accounting for approximately 65 percent of the total acreage treated. Weed control ranks second, followed by defoliation, fertilization, seeding, brush control and plant disease control.

The proposed rules would permit the FAA to exercise reasonable control over agricultural aviation in order to attain a practical level of safety in its everyday operations. No attempt has been made to establish flight procedures for specific crops or to direct the use of any particular application technique. Neither do the rules attempt to prescribe the kinds of chemicals or other materials to be used for the various agricultural and pest control situations.

Comments on the proposed rules (new Part 55 of Civil Air Regulations) were extended to April 1, 1963, at the Dockets Section, FAA, Washington 25, D.C.

March 1 is the new deadline for comment on the proposed rule for "Air Taxi Operators and Commercial Operators of Small Aircraft"—New Part 125 of the Federal Aviation Regulations.

During 1961 firefighters operating for the U.S. Forest Service used airplanes and helicopters to speed smokejumpers to 1,221 forest fires. They dropped 7,700,000 gallons of fire retarding chemicals on 1,868 fires, and flew about 62,000 hours on all missions.

February, 1910—Glenn H. Curtiss develops new hydro-aeroplane at North Island, San Diego, which successfully flies out to U.S.S. Pennsylvania, lands on water, is hoisted aboard, swung back into water, and returns safely to land.

February 23, 1911 — Curtiss demonstrates the first amphibian type of aeroplane equipped with wheels and floats.

Less Than One Per 100 Million

The Civil Aeronautics Board today announced that for the 11th consecutive year the fatality rate per 100 million passenger-miles flown by U.S. certificated route air carriers was less than one.

The CAB Bureau of Safety figures revealed that 1962 had proven to be one of the safest years ever flown by U.S. certificated route air carriers. The preliminary fatality rate per 100 million passenger-miles flown was 0.27 for 1962 which compared with 0.29 for 1961.

It was estimated by the Bureau of Safety that more than 61 million passengers were carried on U.S. certificated route air carriers, scheduled passenger service, in 1962, which is an increase of some 2½ million passengers carried over 1961.

The U.S. supplemental air carrier industry during the same year, 1962, had a fatality rate per 100 million passenger-miles flown of 0 which compared with 9.7 for 1961.

The Board pointed out that U.S. certificated route air carriers scheduled international passenger service operated throughout 1962 for the second consecutive year without a single fatal accident. However, there were two fatal accidents in U.S. certificated all-cargo carriers involving military contract passenger operations internationally in 1962.

The two tables attached present a brief statistical picture of passenger operational safety compiled by the CAB Bureau of Safety for both the U.S. certi-

cated route air carriers and the U.S. supplemental air carriers for the past 11 years.

U.S. CERTIFICATED ROUTE AIR CARRIERS Scheduled Passenger Service

Year	Fatal Accidents	Passenger Facilities	Passengers Carried	Passenger Fatality Rate Per 100 Million Passenger-Miles
1952	8	140	27,569,902	0.86
1953	6	88	31,645,567	0.46
1954	5	17	35,447,523	0.07
1955	9	197	41,707,543	0.62
1956	6	152	46,004,528	0.53
1957	6	70	49,423,170	0.21
1958	8	125	49,165,720	0.38
1959	10	268	56,002,094	0.70
1960	12a	336	57,886,566	0.75
1961	5	124	58,411,977	0.29
1962	5	158	61,000,000*	0.27

U.S. SUPPLEMENTAL AIR CARRIERS Civil and Military Passenger Operations				
1952	1	26	695,335	2.07
1953	1	141	724,014	11.21
1954	1	9	695,152	0.72
1955	2	27	788,783	1.93
1956	0	0	663,603	0
1957	0	0	535,248	0
1958	0	0	676,072	0
1959	1	1	895,518	0.06
1960	2	93	1,057,933	4.21
1961	2	151	978,171	7.7
1962	0	0	821,000*	0

a/Two of these accidents were mid-air collisions between air carrier and non-air carrier aircraft with fatalities resulting in the latter category only.

*Estimated

Congratulations ! !



CERTIFICATES ISSUED RECENTLY TO MONTANA

Koschel, Alvin F., Glendive—Student
Marsh, Leland K., Rapelje—Student
Greer, Jackie D., Buffalo, Wyoming—Student
Mehl, Eugene C., Plentywood—Private
Roberts, William B., Williston, North Dakota—Private
White, Clayton T., Cottondale, Alabama—Instrument & DC-3
Rutscher, John J., Mountainside, New Jersey—Instr. & DC-3
Albright, Rolan T., Roundup—Instrument
Fassmann, Leroy J., Glasgow AFB—Multiengine & Instr.
Adams, John A., Melville—Commercial
Rude, Harlan C., Billings—Mech.-Powerplant
Glennay, Terry R., Roundup—Student

Melvin, Elbert T., Buffalo Gap, South Dakota—Student
Schweitzer, Larry L., Bozeman—Student
Bower, Marjorie B., Worland, Wyoming—Student
Schara, Richard J., Hardin—Student
Ferguson, Michael D., Billings—Student
Wang, Raymond A., Plentywood—Student
Haaven, Henry T., Dagmar—Student
Dedman, Roy H., Billings—Student
Woltermann, Meriam L., Columbus—Student
McLean, Wallace B., Miles City—Student
Knox, George B., Columbus—Student
Judd, Ray H., Red Lodge—Student
Warden, Donald E., Hardin—Student
Jones, June Marie, Gillette, Wyoming—Student
Wayman, John A., Billings—Student
Schmutzler, David Lee, Hill AFB—Commercial
Stensland, Owen M., Ludlow, South Dakota—Private
Olson, John R., Ludlow, South Dakota—Private
Lindblom, Stanley M., Plentywood—Private
Tipton, Jean Allen, Glasgow AFB—Student
Steffan, Fred C., Glasgow AFB—Student
Haller, Larry A., Glasgow AFB—Student
Feezel, Arlene Olson, Opheim—Student
Moore, Herschel N., Thermopolis, Wyoming—Private
Yentzer, Norman P., Sheridan, Wyoming—Commercial
Cernohlavek, William R., Billings—Student
Cobbly, Billy R., Billings—Student
Siemon, George, Xavier—Student
Hanson, Darrel Lee, Graybull, Wyoming—Student
Abell, Dale E., Hardin—Multiengine on Private
Jackson, Cecil C., Gillette, Wyoming—Flight Instructor

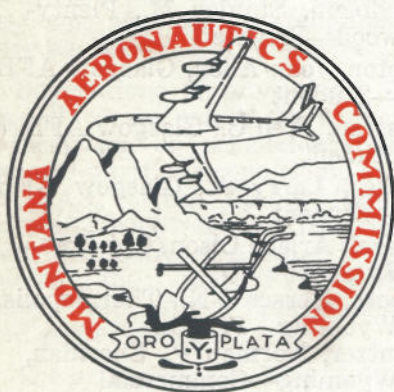
Robertson, James M., Hardin—
Student
Tryan, William F., Flaxville—
Student
Bjerke, Donald Lee, Flaxville—
Student
Thompson, Norman, Lewistown
—Student
Thomas, Richard C., Billings—
Flight Instructor
Byrd, Ronald T., Great Falls—
Student
Holms, Allan G., Missoula—
Student
Flaget, Johnnie G., Frenchtown
—Student
Terry, James G., Missoula—
Student
Mulkey, Alan L., Missoula—
Student
Lott, Robert C., Twin Bridges—
Student
Zavalney, Harold N., Glasgow—
Student

Endsley, Harry B., III, Bigfork
—Student
Nowland, Alvin D., Drummond—
Student
Fink, Albert A., Great Falls—
Student
Mamuzich, Anna, Conrad—
Student
Koessler, Barbara S., Missoula—
Private ASEL
Mulcare, John Pat, Lincoln—
Student
Hillis, Maurice G., Great Falls—
Rotorcraft added Com. ASMEL
ASES and Instrument
Wells, Charles O., Great Falls—
Rotorcraft added Com. ASMEL
& Instrument
Naranche, Daniel J., Butte—
Student
Merriman, John G., Missoula—
Ground Inst., Link added
Wolfe, Gary A., Shelby—Student

Followell, William L., Great Falls
—Advanced & Instrument
Ground Instructor
Dawson, Martin A., Belt—Private
ASEL
Morrison, Jeffrey B., Helena—
Advanced Ground Instructor
Broadbrooks, Beverly A., Malta
—Student
Whitney, Arthur B., Bigfork—P
ASEL
Kornberg, Burton P., Portland,
Oregon—Student
Sperling, Wayne L., Butte—
Student
Westall, Thomas S., Bozeman—
Flight Instructor
Ratkowski, Eugene, Great Falls
—Student
Waber, Glenn R., Great Falls—
Student
Kenison, Robert A., Bozeman—
Student
Seaholm, Marlin E., Three Forks
—Student

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NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform aviation laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."



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